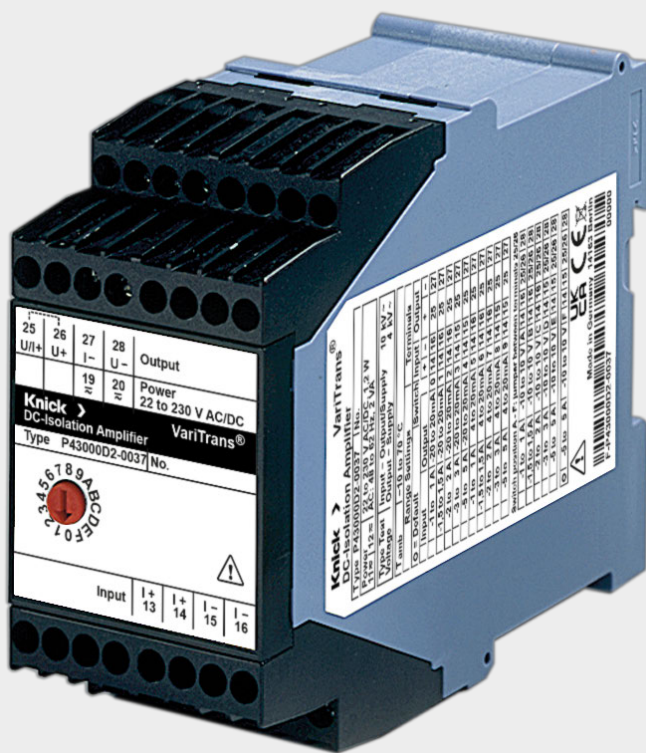


P43000

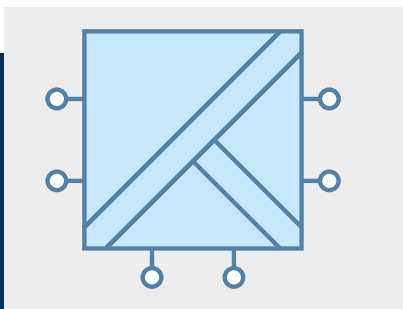
Universal high voltage transducer for electrically isolated measurement of currents at a high potential



For years, the P43000 has been the proven solution for measuring currents at a high potential up to 5 A.

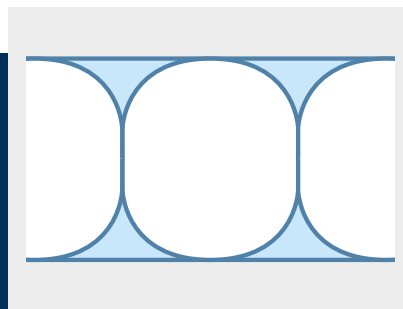
The transducer is designed for high continuous voltages up to 3600 V AC/DC and transient over-voltages up to 30 kV. The P43000 safely separates the high potentials of the input circuit. Selected measuring ranges are already calibrated upon conversion.

Protective separation in accordance with EN 61140 from the input to the output and to the auxiliary power reliably protects against electric shock up to 1800 V AC/DC.



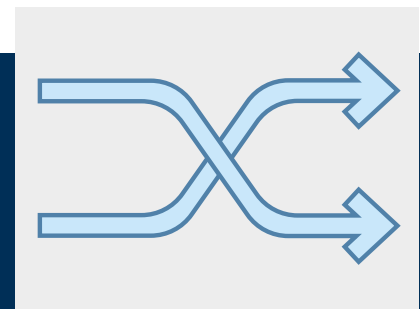
High Insulation

- Continuously voltage-proof in accordance with EN 61010-1, EN 50124-1, UL 347
- Basic insulation up to 3600 V
- Reinforced insulation up to 1800 V



High Signal Integrity

- Precise mapping of the waveform at the input on the output
- Cutoff frequency of 5 kHz
- T_{90} response time of 110 μ s



High Flexibility

- Up to 16 transmission ranges calibrated and switchable
- Freely selectable range limits
- Universal supply 22...230 V AC or DC

Product Identification

Input	Output	Model Designation Working voltage ≤ 2.2 kV AC/DC Test voltage 10 kV AC 1 to 16 transmission ranges in accordance with customer require- ments, calibrated and switchable	Model Designation Working voltage ≤ 3.6 kV AC/DC Test voltage 15 kV AC 1 calibrated transmission range in accordance with customer requirements
±1 A, ±1,5 A, ±2 A, ±3 A, ±5 A, bipolar	±20 mA, ±10 V, bipolar and 4...20 mA	P43000D2	-
0...(±)100 mA up to 0...(±)5 A, uni-/bipolar	(±)20 mA, (±)10 V, uni-/ bipolar or 4...20 mA	P43000D2-nnnn	P43100D2-nnnn

Delivery including individual test certificate 2.2 in accordance with EN 10204.

Accessories

High-voltage signal cables Insulation 5400 V DC, 3600 V AC, 2 m, 2 pieces	ZU1475
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Specifications (Excerpt)

Excerpt from the user manual. Detailed information → knick-international.com

Input

Input	P43000D2	±1 A, ±1,5 A, ±2 A, ±3 A, ±5 A, bipolar Calibrated and switchable Factory setting: ±5 A
	P43000D2-nnnn	0...(±)100 mA up to 0...(±)5 A, uni-/bipolar 1 to 16 ranges in accordance with customer require- ments, calibrated and switchable
	P43100D2-nnnn	0...(±)100 mA up to 0...(±)5 A, uni-/bipolar 1 range in accordance with customer requirements, fixed settings

Output

Output	P43000D2	±20 mA, ±10 V, bipolar and 4...20 mA Calibrated and switchable Factory setting: ±10 V
	P43000D2-nnnn	(±)20 mA, (±)10 V, uni-/bipolar and/or 4...20 mA 1 or more ranges in accordance with customer requirements, calibrated and switchable Transmission from bipolar input to unipolar output possible
	P43100D2-nnnn	(±)20 mA, (±)10 V, uni-/bipolar or 4...20 mA In accordance with customer requirements, fixed settings Transmission from bipolar input to unipolar output possible
Offset	Factory-side up to ±150 %	

Transfer Characteristics

Cutoff frequency (–3 dB)	Approx. 5 kHz Configurable to 10 Hz factory-side	
Response time T_{90}	Approx. 110 µs	
Gain error	< 0.3 % of measured value	

Auxiliary Power

Auxiliary power	22...230 V AC, ±10 %, 48...62 Hz, approx. 2 VA	
	22...230 V DC, ± 10 %, approx. 1.2 W	

Insulation

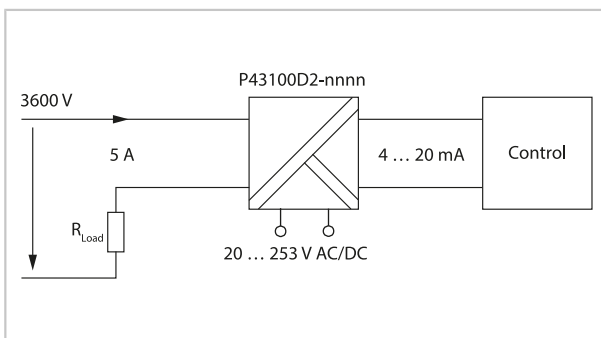
Galvanic isolation	3-port isolation between input, output and auxiliary power	
Test voltage	Calibrated and switchable	10 kV AC input to output/auxiliary power
	Fixed settings (P430**D2-nnnn)	10 kV AC input to output/auxiliary power
	Fixed settings (P431**D2-nnnn)	15 kV AC input to output/auxiliary power
	All types	4 kV AC output to auxiliary power
Working voltage (basic insulation) in accordance with EN 61010-1	Calibrated and switchable or fixed settings (P43000D2, P430**D2-nnnn)	Up to 2200 V AC/DC for overvoltage category OV3 and pollution degree PD2 for input to output/auxiliary power (transient overvoltages: max. 13.5 kV)
	Fixed settings (P431**D2-nnnn)	Up to 3600 V AC/DC for overvoltage category OV3 and pollution degree PD2 for input to output/auxiliary power (transient overvoltages: max. 20 kV)

Rated insulation voltage in accordance with EN 50124-1	Calibrated and switchable or fixed settings (P43000D2, P430**D2-nnnn)	Up to 2200 V AC/DC for overvoltage category OV3 and pollution degree PD2 for input to output/auxiliary power
	Fixed settings (P431**D2-nnnn)	Up to 3600 V AC/DC for overvoltage category OV3 and pollution degree PD2 for input to output/auxiliary power
Rated voltage in accordance with UL 347	P430**	2200 V AC (45...65 Hz) / DC
	P431**	3600 V AC (45...65 Hz) / DC
	Input impedance	< 0.6 Ω
	BIL/Rated impulse voltage	30 kV (1.2/50 μ s)
	Overvoltage category	OV3
	Pollution degree	PD2
P43000 contains no components that require maintenance.		
Use copper cables only.		

Application Example

Note: The figure shows an example of direct measurement at high input potential. The specified values refer to the P43100D2-nnnn version.

Note: In the figure, *Control* is used as an umbrella term for any form of further processing of the output signal.



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Subject to change.